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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,571	09/21/2001	Hans-Joerg Mathony	10191/1917	5723

7590 04/08/2004

KENYON & KENYON
One Broadway
New York, NY 10004

EXAMINER	
BARNES, CRYSTAL J	
ART UNIT	PAPER NUMBER
2121	

DATE MAILED: 04/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/960,571	MATHONY, HANS-JOERG	
	Examiner	Art Unit	
	Crystal J. Barnes	2121	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 December 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☒ Claim(s) *10* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *10*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This action is in response to the amendment received on 04 December 2003.

2. New claims 6-15 have been entered. Claims 1-15 are now pending in the application.

Priority

3. Acknowledgment is made of applicant's claim for priority under 35 U.S.C. 119(a)-(d) based upon an application filed in Germany on 12 September 2000. A claim for priority under 35 U.S.C. 119(a)-(d) cannot be based on said application, since the United States application was filed more than twelve months thereafter.

Drawings

4. The replacement drawings were received on 04 December 2003. These replacement drawings are acceptable.

Specification

5. The amendments to the specification, received on 04 December 2003, are acceptable.

Claim Objections

6. Applicant is advised that should claim 9 be found allowable, claim 10 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Response to Arguments

7. Applicant's arguments, see Remarks on pages 7-8, filed 04 December 2003, with respect to the rejection(s) of claim(s) 1, 2 and 5 under 35 USC 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is

made in view of USPN 6,326,704 B1 to Breed et al. and USPN 6,338,010 to Sparks et al.

8. Applicant's arguments with respect to claims 3 and 4 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

9. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

10. Claims 1, 2, 4 and 7-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,326,704 B1 to Breed et al. in view of USPN 6,338,010 to Sparks et al.

As per claim 1, the Breed et al. reference discloses a device for one of controlling and regulating an operational sequence in a motor vehicle, comprising: a carrier (see column 22 lines 25, 29-31, 39-42, "vehicle 1800"); a communication bus (see column 22 lines 38-39, "data bus 1600") integrated on the carrier ("vehicle 1800"); and a plurality of arrangements (see column 19 lines 17-20, 49-53, "components, sensors") for performing one of a control and a regulation, each one of the arrangements (see column 22 lines 25-38, "component 1000, various

sensors") including a processor (see column 28 lines 8-18, "processor") that includes a storage unit and an input and output unit ("receive and output signals"), wherein the plurality of arrangements ("components, sensors") are integrated on the carrier ("vehicle 1800"), and are interconnected by the communication bus ("data bus 1600"). Also see column 2 lines 25-29 and column 4 lines 9-10, 18-19.

The Breed et al. reference does not expressly disclose a processor that includes a storage unit.

The Sparks et al. reference discloses

(see column 4 lines 27-31, "... single integrated circuit ... single integrated multiplexer/controller circuit 34.")

(see column 4 lines 34-38, "... microprocessor portion and a memory unit ...")

(see column 4 lines 43-56, "The vehicle data bus 18 ... input/output port ... engine control computer, vehicle control computer and/or any other auxiliary computer operable to control and manage a vehicle operating condition ...")

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the vehicle data bus system taught by the Breed et al. reference to include communicating with the control computer taught by the Sparks et al. reference.

One of ordinary skill in the art would have been motivated to modify the vehicle data bus system to include communicating with the control computer to provide additional means to control and manage vehicle operating conditions.

As per claim 2, the Breed et al. reference does not expressly disclose the carrier includes a printed circuit board.

The Sparks et al. reference discloses

(see column 3 lines 44-47, "...board 14 ... printed circuit board ...")

(see column 4 lines 4-6, "... sensors ... circuit board 14 ... known sensor mounting techniques ...")

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the vehicle electrical system taught by the Breed et al. reference to include the module taught by the Sparks et al. reference.

One of ordinary skill in the art would have been motivated to modify the vehicle electrical system to include the module to illustrate housing means for the vehicle electrical system in a central location facilitating ease of repair/response to vehicle operating conditions.

As per claim 4, the Breed et al. reference discloses further comprising an auxiliary energy source (see column 31 lines 37-39, "backup power supply").

As per claim 7, the Breed et al. reference does not expressly disclose the auxiliary energy source is arranged on a printed circuit board.

The Sparks et al. reference discloses

(see column 3 lines 61-66, "A number of sensors or sensing systems are mounted ... any known sensors or sensing systems operable to sense operating conditions ... and produce sensor signals ...")

(see column 4 lines 57-63, "... any electrical power required ... connector 36 via the vehicle data bus 18 ... second electrical connector 40 ...")

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the vehicle electrical system taught by the Breed et al. reference to include the module housing taught by the Sparks et al. reference.

One of ordinary skill in the art would have been motivated to modify the vehicle electrical system to include the module housing to illustrate various elements in one location included in the vehicle electrical system, thereby facilitating ease of repair/response to vehicle operating conditions.

As per claim 8, the Breed et al. reference discloses the device is connected to a battery (see column 19 line 37).

As per claim 9, the Breed et al. reference discloses the plurality of arrangements includes at least three arrangements (see column 22 lines 25-38, "component 1000, various sensors").

As per claim 10, the Breed et al. reference discloses the plurality of arrangements includes three arrangements (see column 22 lines 25-38, "component 1000, various sensors").

As per claim 11, the Breed et al. reference discloses further comprising a plurality of input and output arrangements (see column 19 lines 17-48, "component" and see column 20 lines 42-44, "signal") that are connected to at least one of a sensor (see columns 19-20 lines 49-26, "sensor") and an actuator (see column 20 lines 27-41, "actuator") arranged in the motor vehicle ("motor vehicle") and at least one data line (see column 22 lines 38-42, "data bus 1600") connected to each of the input and output arrangements (see column 22 lines 21-38, "component 1000").

As per claim 12, the Breed et al. reference discloses the plurality of arrangements ("components, sensors") one of control and regulate at least one of an engine management system (see column 19 lines 24, 45, 67), an anti-lock braking system (see column 19 line 26, column 20 line 23), body electronics (see column 19

line 47, column 20 lines 31-34), a transmission (see column 19 line 25), and an airbag (see column 19 line 56, column 20 line 35).

As per claim 13, the Breed et al. reference discloses further comprising a gateway (see column 26 lines 43-50, "diagnostic device") connected to the communications bus (see column 31 lines 23-29, data bus network) and a data bus of the motor vehicle (vehicle data bus).

As per claim 14, the Breed et al. reference discloses the communication bus includes a CAN communication bus (see column 31 lines 31-35, "CAN Protocol").

As per claim 15, the Breed et al. reference discloses the plurality of arrangements (see column 22 lines 25-38, "component 1000, various sensors") and the communication bus (see column 22 lines 38-39, "data bus 1600") are combined on the carrier (see column 22 lines 25, 29-31, 39-42, "vehicle 1800").

11. Claims 3 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 6,326,704 B1 to Breed et al. in view of USPN 6,338,010 to Sparks et al. as applied to claims 1, 2, 4 and 7-15 above, and further in view of USPN 4,910,658 to Dudash et al.

As per claim 3, the modified Breed et al. and Sparks et al. references do not expressly disclose further comprising a plurality of voltage regulators.

The Dudash et al. reference discloses

(see column 11 lines 3-8, "Microprocessor 100 ... SAM power regulator 108 ... bus 22 to a power source. Power regulator 108 comprises a conventional voltage regulator which functions to ensure that a stable voltage level is supplied to the microprocessor 100.")

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to further modify the vehicle electrical system taught by the Breed et al. reference including the control computer taught by the Sparks et al. reference to include the conventional voltage regulator taught by the Dudash et al. reference.

One of ordinary skill in the art would have been motivated to further modify the vehicle data bus system including the control computer to include a conventional voltage regulator to ensure that a stable voltage level is supplied to the microprocessor/CPU.

As per claim 5, the modified Breed et al. and Sparks et al. references do not expressly disclose the communications bus is to be decoupled from a data bus of the motor vehicle.

The Dudash et al. reference discloses

(see column 4 lines 38-46, "... serial configuration ... added or deleted from the system ... selected location along bus 22 ...")

(see column 22 lines 20-28, "... very versatile ... readily expandable so that additional process components may be monitored and/or controlled ...")

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to further modify the vehicle electrical system taught by the Breed et al. reference including the control computer taught by the Sparks et al. reference to include components that are removably connected as taught by the Dudash et al. reference.

One of ordinary skill in the art would have been motivated to further modify the vehicle data bus system including the control computer to include components that are removably connected to provide a versatile and expandable system so that additional components may be monitored and/or controlled.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to vehicle control/communication systems in general:

USPN 6,526,460 B1 to Dauner et al.

USPN 4,964,076 to Schurk

USPN 4,734,861 to Bertolasi et al.

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the

advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Crystal J. Barnes whose telephone number is 703.306.5448. The examiner can normally be reached on Monday-Friday alternate Mondays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anil Khatri can be reached on 703.305.0282. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

ANIL KHATRI
SUPERVISORY PATENT EXAMINER

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

cjb
February 24, 2004